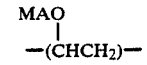
-continued

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NI | 0.8 | 6.4 | 1.2 | 0.3 | 1.0 | 1.0 | — |
| $Q_1$ | — | — | — | — | — | — | — |
| $Q_2$ | — | — | — | — | — | — | 5.0 |
| $A_1$ | — | — | — | — | — | — | — |
| BENT | — | — | — | — | — | — | 6.0 |
| STPP | — | 5.6 | 25.0 | 39.4 | — | — | 28.0 |
| PYRO | — | 22.4 | 5.9 | — | — | — | — |
| NTA | — | — | — | — | — | — | 3.0 |
| $Z_4A$ | 29.0 | — | — | — | 27.0 | 10.0 | — |
| CARB | 17.0 | 12.2 | 16.8 | 12.0 | 17.0 | 15.0 | 12.0 |
| SIL | 2.5 | 6.0 | 4.7 | 5.5 | 2.0 | 2.0 | 6.0 |
| ODS | — | — | — | — | — | — | — |
| TMS/TDS | — | — | — | — | — | — | — |
| ACR1 | 6.0 | — | — | — | — | — | — |
| ACR2 | — | — | — | — | — | — | — |
| $MgSO_4$ | 2.0 | — | — | — | — | — | — |
| $Na_2SO_4$ | 15.0 | 20.0 | 10.0 | 7.0 | 20.0 | 20.0 | 24.0 |
| Chelant | 1.0 | — | 0.4 | — | — | — | — |
| CMC | — | — | — | — | — | — | — |
| $PB_4$ | 15.0 | 5.0 | 5.0 | — | — | — | — |
| $PB_1$ | 4.0 | — | — | — | — | — | — |
| TAED | 3.0 | 2.0 | — | — | — | — | — |
| NOBS | — | — | 8.0 | — | — | — | — |
| INOBS | 1.0 | — | — | — | — | — | — |
| SRP | 1.0 | — | — | — | — | — | — |
| Product of Example 17 | 4.0 | 4.0 | 4.0 | 3.0 | 6.0 | 10.0 | 2.0 |
| $H_2O$ and minors | To 100 | | | | | | |

| | 36 | 37 | 38 | 39 |
|---|---|---|---|---|
| LAS | 6.0 | 6.0 | 14.0 | — |
| TAS | 3.0 | 3.0 | — | — |
| NI | 6.0 | 6.0 | — | 12.0 |
| CARB | 10.0 | 7.0 | — | — |
| SIL | 7.0 | 3.0 | — | — |
| $Na_2SO_4$ | 15.0 | 20.0 | 20.0 | 20.0 |
| $PB_4$ | 18.0 | 10.0 | 10.0 | 2.0 |
| TAED | 2.0 | 2.0 | 2.0 | 2.0 |
| Product of Example 17 | 20.0 | 25.0 | 30.0 | 15.0 |
| $H_2O$ and minors | To 100 | | | |

What is claimed is:

**1.** A random copolymer especially adapted for use as a dispersant in laundry detergent compositions, said random copolymer having a molecular weight in the range from about 635 to about 50,000 and comprising from about 0.10 to about 0.95 mole fraction of repeat units of the formula



wherein M is sodium, A is selected from—OC-(O)C(L)HCH$_2$(O)C—, —OC(O)CH$_2$C(L)H(O)C—and mixtures thereof and L is selected from the group consisting of aspartate, glutamate, glycinate, ethanolamino, β-alanate, taurine, aminoethylsulfate, alanate, sarcosinate, N-methylenthanolamino, iminodiacetate, 6-aminohexanoate, Nmethylaspartate and diethanolamino; wherein said random copolymer is produced by a process comprising

(i) reacting a polyvinyl alcohol with maleic anhydride to produce a butenedioate half-ester of said polyvinyl alcohol; and

(ii) reacting said butenedioate half-ester with an amine reactant selected from the group consisting of aspartic acid, glutamic acid, glycine, β-alanine, ethanolamino, taurine, aminoethylsulfate, alanine, sarcosine, N-methylethanolamine, iminodiacetic acid, 6-aminohexanoic acid, N-methylaspartic acid and diethanolamine;

provided that in step (ii), the alkalinity is controlled by means of a carbonate-buffered reaction medium.

**2.** A random copolymer according to claim **1** wherein in step (ii), said reaction medium is a concentrated aqueous reaction medium.

**3.** A random copolymer according to claim **2** wherein L is aspartate and said amine reactant is aspartic acid.

**4.** A random copolymer according to claim **3** wherein step (i) comprises reacting a mixture formed from said polyvinylalcohol and said maleic anhydride together with tetrahydrofuran and an effective amount of a sodium acetate catalyst; provided that said mixture comprises in total no more than from about 5% to about 20% tetrahydrofuran; whereby a high yield of said butenedioate half-ester is secured.

**5.** A random copolymer according to claim **4** wherein the butenedioate half-ester of said polyvinyl alcohol, produced in step (i), is, prior to step (ii), purified by partitioning into the lower layer of a tetrahydrofuran/-water mixture, said mixture having a volume/volume ratio of said tetrahydrofuran and water ranging from about ½ to about 1/12.

* * * * *